Developing a Pre-Emptive Pan-Coronavirus Vaccine

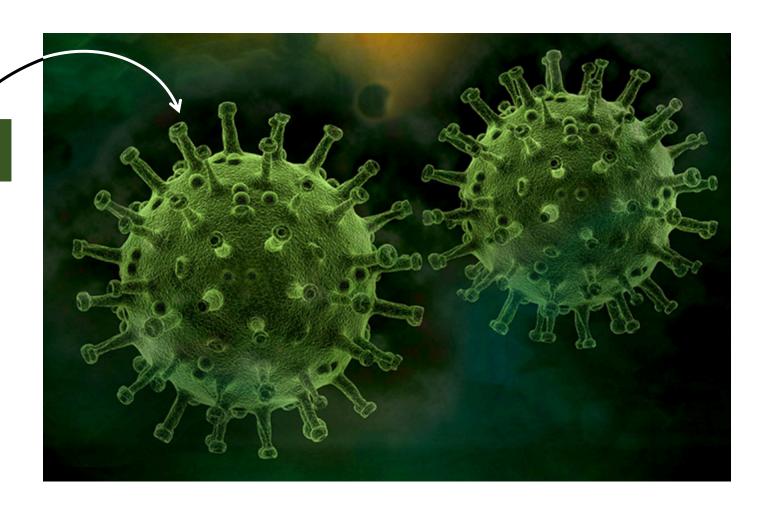
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The emergence of Coronaviruses

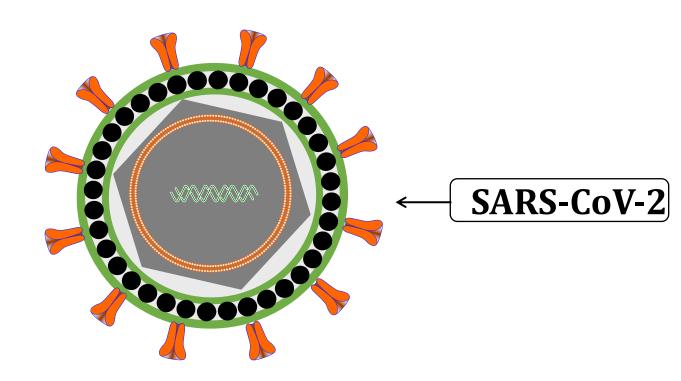
Spike Protein



Different Approaches to a Coronavirus Vaccine

Whole-Virus Vaccines

Vaccines that modify the entire coronavirus to provoke an immune response.

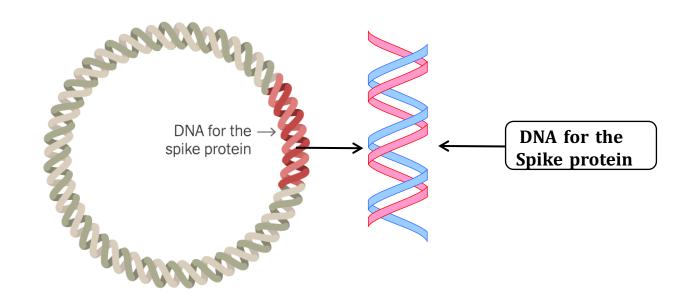


Inactivated and Live Attenuated Vaccines

EXAMPLE: SINO-PHARMA COVID vaccine

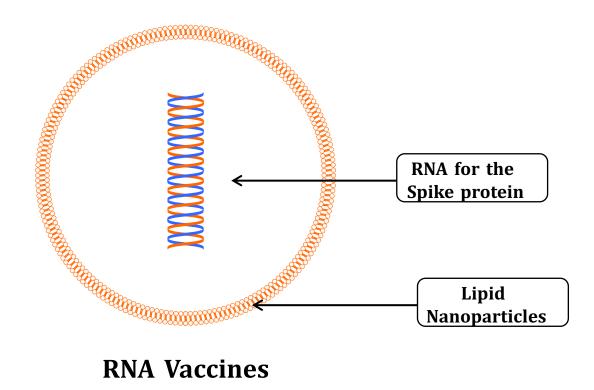
Genetic Vaccines

Vaccines that use part of the coronavirus's genetic code.



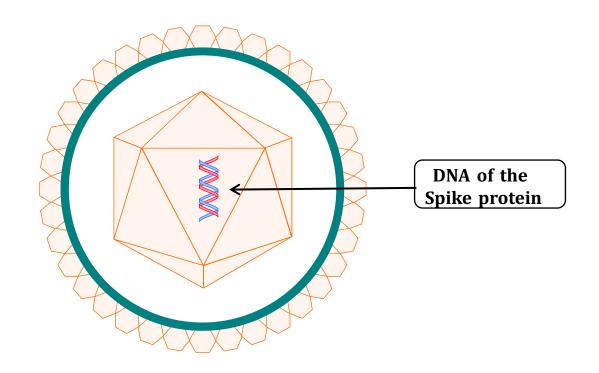
DNA Vaccines

Genetic Vaccines



EXAMPLES: Moderna & Pfizer COVID vaccines

Viral Vector Vaccines

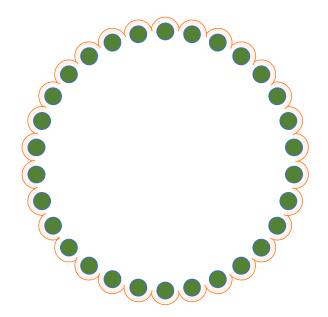


Vaccines Using Adenovirus or other vector viruses

EXAMPLES: AstraZeneca and Johnson & Johnson COVID vaccines

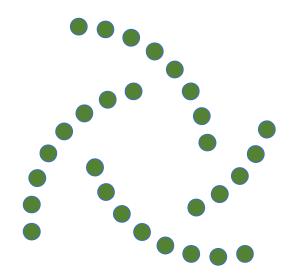
Protein-Based Vaccines

Vaccines that use a coronavirus protein or a fragment of a protein



Virus-Like Particle Vaccines

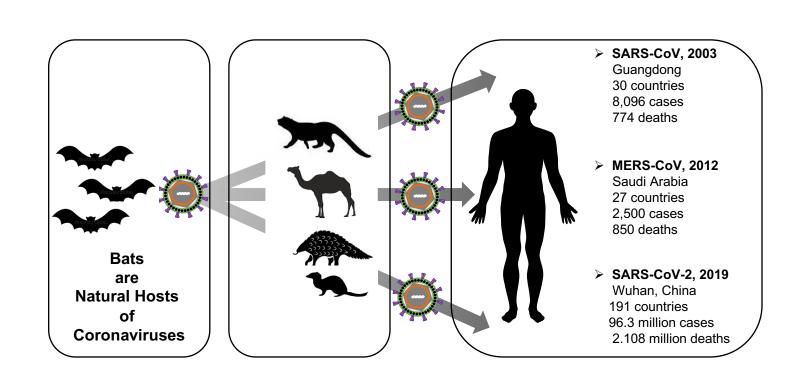
Protein Vaccines



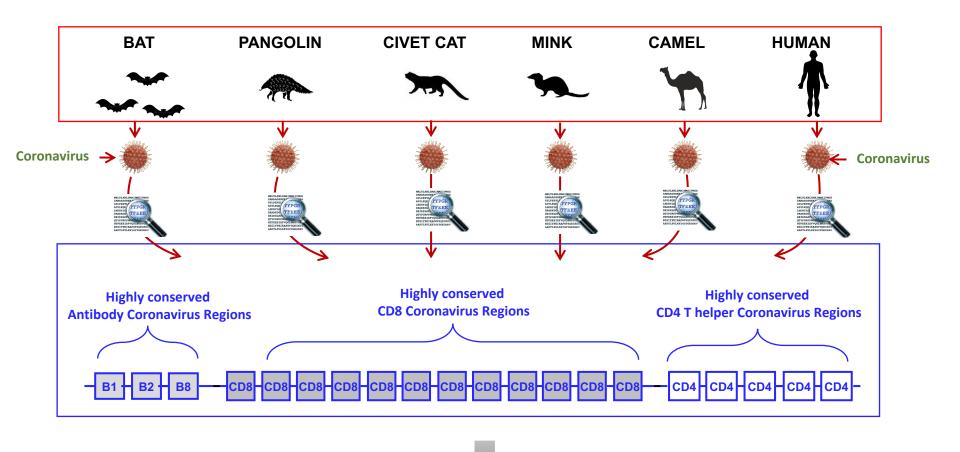
Recombinant Vaccines

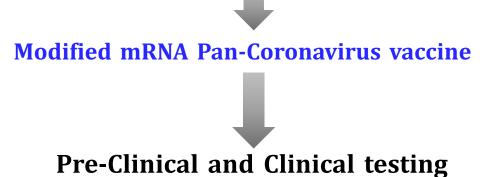
EXAMPLE: NovaVax COVID vaccine

The emergence of Coronaviruses: From the natural hosts bats to intermediate animal reservoirs to humans



Design of a prototype pre-emptive pan-Coronavirus vaccine





NEXT

Expose Mice with SARS-CoV-2

Vaccination of mice
Using each of the
pan-Coronavirus vaccine candidates



An innovative "humanized" HLA-DR/HLA-A*0201/hACE2 triple transgenic mouse model



Highly Secured BSL3 facilities at UC Irvine



OUT OF SEVERAL VACCINE CANDIDATES THE BEST CANDIDATE WILL BE MOVED TO PHASE 1 CLINICAL TRIAL